

### AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A method for generating an output signal locked to an input signal, the method comprising:

receiving at a detector the input signal and ~~a reference~~ an oscillator signal;

generating a detector output signal indicative of a difference between the input signal and the ~~reference~~ oscillator signal;

receiving the detector output signal at a first filter coupled to the detector and providing a filtered detector output signal;

receiving the filtered detector output signal at a transconductance (gm) amplifier coupled to the first filter and providing a current output signal;

receiving the current output signal and a phase error signal at a multiplexer configured to provide, based on a mode control signal, only one of the current output signal received from the gm amplifier or ~~[[a]] the phase error~~ signal received from ~~another device~~ a charge pump;

receiving either the current output signal or the phase error signal at a second filter coupled to the multiplexer and providing a control signal; ~~[[and]]~~

receiving at an oscillator coupled to the second filter the control signal and providing ~~[[an]]~~ the oscillator signal as an output signal having a property that is adjusted by the control signal;

receiving at a phase and frequency detector the oscillator signal and a reference signal;

generating a phase and frequency output based on a timing difference between the oscillator signal and the reference signal;

receiving at the charge pump the phase and frequency output; and

generating the phase error signal based on the phase and frequency output.

2. (Original) The method of claim 1, wherein the first filter is a single-pole RC filter.

3. (Currently amended) The method of claim 1 further comprising:

receiving at a frequency divider coupled to the oscillator the oscillator signal and dividing the oscillator signal for generating ~~the reference~~ a divided oscillator signal, and providing the divided oscillator signal to the phase and frequency detector.

4. (Original) The method of claim 1, wherein the input signal is a serial data stream.
5. (Original) The method of claim 4, wherein the serial data stream has a data rate of at least 2.488 GHz.
6. (Original) The method of claim 1, wherein the gm amplifier includes a differential amplifier receiving the filtered signal and a current load circuit coupled to the differential amplifier providing the current output signal.
7. (Original) The method of claim 1, wherein the detector output signal has a peak-to-peak signal swing of less than one volt.
8. (Original) The method of claim 1, wherein the reference signal is a reference clock signal.